UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
INSECTICIDE DIVISION

Patent List No. 34

A LIST OF

UNITED STATES PATENTS

Issued from 1917 to 1933 inclusive

relating to

INSECTICIDE SPRAYERS, PART II

Compiled by

R. C. Roark

Washington, D. C.
November, 1934

A LIST OF UNITED STATES PATENTS ISSUED FROM 1917 TO 1933, INCLUSIVE, RELATING TO INSECTICIDE SPRAYERS, PART II

Compiled by

R. C. Roark

Insecticide Division, Bureau of Entomology and Plant Quarantine

The 83 devices described in Patent List No. 34 are similar to those included in Patent List No. 33 entitled "Insecticide Sprayers, Part I", but differ sufficiently from the latter in mechanical detail to be assigned to a separate sub-class by the United States Patent Office.

Every effort has been made by the compiler to make this list of patents complete and no discrimination is intended against any patent mention of which is inadvertently omitted.

The Department of Agriculture assumes no responsibility for the merits or workableness of any of the patents, nor does it recommend any of the inventions listed.

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1,304,746 (May 27, 1919; appl. May 5, 1917). FUMIGATING AND SPRAYING APPARATUS. William G. Dingle, Los Angeles, Calif. - This device delivers a measured amount of liquid hydrocyanic acid for fumigating citrus and other trees.

1,329,103 (Jan. 27, 1920; appl. Apr. 18, 1919). SPRAYING APPARATUS. Cosmo D. Zipeto, Elmira, N. Y. - An apparatus for spraying fruit trees and plants in which the fluid is sprayed by means of air pressure without the necessity of the direct pumping of the fluid is described.

1,330,448 (Feb. 10, 1920; appl. Feb. 20, 1919). ATOMIZER. George McD. Johns, St. Louis, Mo. - W. N. Matthews & Brother, Inc.- A spray gun which may be used in spraying insecticides is described.

1,377, 654 (May 10, 1921; appl. Sept. 13, 1920). SPRAYING-MACHINE. Henry C. Baumgardner, Ann Arbor, Mich. - This invention relates to a compressed air spraying machine mainly designed for farm and orchard work, the general object of the invention being to provide a continuous spray with a comparatively small amount of compressed air.

1,395,086 (Oct. 25, 1921; appl. Aug. 23, 1920). AIR-CHARGING PUMP FOR SPRAYING. Henry E. Brandt, North St. Paul, Minn. - Dobbins Mfg. Co., North St. Paul, Minn. - An air-charging pump for sprayers of the kind wherein the poisonous liquid is carried in a suitable receptacle

and charged with air under pressure to secure the spraying action through a valve-controlled spraying nozzle is described.

Re. 15,248 (Dec. 20, 1921; appl. July 2, 1920; Orig. [illegible] 1,304,746 May 27, 1919; appl. May 5, 1917). FUMIGATING AND SPRAYING APPARATUS. William G. Dingle, Los Angeles, Calif. - Owl Fumigating Corp., New York, N. Y. - This device delivers a measured amount of liquid hydrocyanic acid for fumigating citrus and other trees. It is similar to that described in U. S. patent 1,304,747, issued May 27, 1919 to the patentee.

1,408,815 (Mar. 7, 1922; appl. Mar. 2, 1921). VINE PROTECTOR FOR SPRAYING MACHINES. Martin F. McKasty, New Hyde Park, N. Y. - A pair of U-shaped guard bars for the wheels of a traction sprayer are described.

1,432,958 (Oct. 24, 1922; appl. July 14, 1920). SPRAYING NOZZLE. William E. Boyce, Albion, N. Y. - This invention relates to nozzles and particularly to those spraying nozzles which may have both a wide or conical whirling spray and a relatively long and narrow stream, and the object is to provide improvements therein whereby the flow from the nozzles may be regulated and controlled with facility.

1,433,174 (Oct. 24, 1922; appl. July 11, 1921). SPRAYING MACHINE. William Brown, Osakis, Minn. - This sprayer is adapted to be attached to the frame of a cultivating implement and the pump is actuated by the movement of the cultivator wheels.

1,446,093 (Feb. 20, 1923; appl. Aug. 16, 1920). FUMIGATING APPLICATOR. Ralph M. Jackson, La Farba, Calif. - This device delivers a measured amount, e. g. 2 oz., of liquid fumigant at each stroke of its double acting pump. It is intended for use in fumigating citrus trees.

1,447,874 (Mar. 6, 1923; appl. Feb. 4, 1922). COMBINATION SEED-FUNGUS EXTERMINATOR AND SPRAYER. Samuel Larson, Hinsdale, Ill. - The purpose of this machine is to treat seed and also to spray fruit trees. It consists of a tank with a pump, to be operated by hand, mounted on a push cart. Seeds are treated by placing on a screen and spraying formaldehyde against them.

1,461,546 (July 10, 1923; appl. June 17, 1920); renewed May 31, 1923). APPARATUS FOR SPRAYING LIQUIDS BY COMPRESSED AIR. Robert Robertson, London, England. - One-half to Frank H. Austin, Audlem, Chester, England. - This sprayer is designed for horticultural use and may be carried like a knapsack on the back of the operator. The liquid is discharged under pneumatic pressure.

1,465,377 (Aug. 21, 1923; appl. Jan. 24, 1922). SPRAYING DEVICE. Robert L. Strain, Clifton, Colo. - This device is designed to be used in association with a tractor, novel means being provided for driving the spraying mechanism from the drive pulley commonly provided on tractors.

1,466,370 (Aug. 28, 1923; appl. May 21, 1920). SPRAYING CONTAINER. Henry N. Moran and Christy A. Cellea, Woonsocket, R. I. - This spray container is made of metal and is adapted to spray or atomize liquids such as perfume, disinfectants, deodorants and the like by air pressure produced within the container by compressing or deforming the sides of the latter with the fingers.

1,469,801 (Oct. 9, 1923; appl. Oct. 17, 1921). ATTACHMENT FOR SPRAYERS. Walter A. McKenney, Corinna, Me. - Fenders for protecting potato vines and other plants from the wheels of a spraying machine are described.

1,470,246 (Oct. 9, 1923; appl. Sept. 1, 1920). SPRAY BAR. Leland Willis and Olin F. Woodworth, Grenlock, N. J. - Bateman & Co., Inc., Wilmington, Del. - This spray bar is designed so that both of its extremities will yield laterally without injury in case they should engage some fixed structure while the machine is being moved.

1,470,436 (Oct. 9, 1923; appl. Apr. 18, 1922). VERMIN-KILLING DEVICE FOR PLANTS. John W. Furman, Point Township, Northumberland County, Pa. - This device consists of a container with a spout near the bottom through which a regulated quantity of insecticide can be applied to cabbage, radish, and similar vegetable or fruit plants.

1,489,907 (Apr. 8, 1924; appl. Apr. 30, 1923). METHOD AND APPARATUS FOR SPRAYING TREES AND THE LIKE. Frank Stirling, Gainesville, Fla. - A power sprayer for spraying fruit trees, ornamentals, vegetables or crops of any kind is described. The spray pump is operated by a water motor.

1,495,771 (May 27, 1924; appl. Jan. 19, 1924). MEASURING AND SPRAYING APPARATUS FOR A VOLATILE FUMIGANT. Mortimer J. Brown, Niagara Falls, N.Y., - Pacific R & H Chemical Corp., Los Angeles, Calif. - This invention relates to apparatus for discharging measured quantities of volatile liquid fumigant, more especially liquid hydrocyanic acid for treatment of citrus trees.

1,502,539 (July 22, 1924; appl. Aug. 23, 1923). POISON APPLIER. Fletcher G. Asbill, Ridge Springs, S. C. - This device consists of a bottle in a holder and is adapted for use in applying poison to cotton or other growing crops for the purpose of checking or destroying boll-weevil or other undesirable insects.

1,503,159 (July 29, 1924; appl. July 30, 1923). SPRAYING MACHINE. Charles E. Haywood, Larkins, Fla. - This invention operates on the principle of an atomizer and is preferably formed by adding a nozzle, for discharge of the liquid spraying materials, to the orifice of the discharge pipe of a machine commonly known as a power grove duster, but may embody an air blower constructed on a principle similar to the grove duster, the liquid discharge nozzle being connected, by means of a flexible hose or pipe, to a tank or other suitable source of supply for the liquid spraying material.

1,519,103 (Dec. 16, 1924; appl. May 16, 1923). SPRAYING MACHINE. John. H. J. Ayscue, Mount Pleasant, S. C. - This machine is especially designed for spraying a suitable poisonous liquid upon cotton plants for killing boll weevils.

1,530,781 (Mar. 24, 1925; appl. Oct. 4, 1923). SPRAYER PIPE. George W. Lisk, Clifton Springs, N. Y. - A sprayer pipe used in spraying rose bushes, shrubs, etc. is described.

1,536,001 (Apr. 28, 1925; appl. Feb. 9, 1923). PLANT-TREATING TRUCK. George H. Hayes, Atlanta, Ga. - A plant treating machine, which can be drawn by one horse and which is so formed that the horse will walk between two rows while the machine will straddle a row so that several rows of plants can be treated at one time is described.

1,538,855 (May 19, 1925; appl. Sept. 29, 1924). FUMIGATING APPLICATOR. Ralph M. Jackson, La Habra, Calif. - A measuring device and gasifier for applying liquid gases for fumigating purposes under covered trees is described. The apparatus is portable and can be carried by hand.

1,539,771 (May 26, 1925; appl. Jan. 12, 1924). SPRAYING APPARATUS. John A. Rhodes, Atlanta, Ga. - James H. Walker, Jr., Griffin, Ga. - This device is adapted for use in spraying plants and the like to destroy insect life. It is of a portable type wherein is employed a force feed in driven connection with a supporting wheel for the device.

1,541,793 (June 16, 1925; appl. Dec. 29, 1920). FUMIGATING APPARATUS. Kenneth F. Cooper, Great Neck, N. Y. - American Cyanamid Co., New York, N. Y. - This machine delivers a measured amount of a liquid fumigant such as hydrocyanic acid.

1,542,309 (June 16, 1925; appl. June 28, 1924). SPRAYING APPARATUS. Lawrence B. Le Duke, Lawrence, Mich. - This apparatus for spraying grape vines to combat certain pests and diseases may be used as an attachment upon spraying equipment now commonly employed. As the vehicle is driven along the row of grape vines, spreader fingers brush across the vines and spread the leaves so that the spray reaches the inner sides of the leaves and the vines.

1,543,178 (June 23, 1925; appl. Oct. 23, 1923). FLUID-SPRINKLING DEVICE. Jean Meili, Veltheim, Near Winterthur, Switzerland. - Adolf Kauf, Zurich, Switzerland. A portable device for spraying plants is supported by shoulder straps.

1,544,509 (June 30, 1925; appl. July 19, 1923). SPRAYING MACHINE. Grover C. Powell, Ellenton, Fla. - One-half to W. H. Brown, Manatee County, Fla. - This machine provides means whereby a single solution may be applied to plants at a certain predetermined height or over the whole plant, or distinct and separate solutions may

be applied at different heights to the plants. For example, lead arsenate may be applied to the upper part of tomato vines to destroy eating insects such as worms, and fungicides may be applied to the whole plant, especially the older and lower leaves.

1,544,720 (July 7, 1925; appl. Jan. 13, 1922). SPRAYER. Henry E. Brandt, North St. Paul, Minn. - Dobbins Mfg. Co., North St. Paul, Minn. - This device for spraying vegetables, trees, etc., can be supported and the spraying nozzle manipulated with one hand.

1,546,631 (July 21, 1925; appl. Aug. 21, 1923). SPRAYING-MACHINE VEHICLE. Fred C. Delbridge, Providence Township, Buena Vista County, Iowa. - A horse-drawn machine for spraying corn, potatoes, cabbage, tomatoes, tobacco, cotton and other plants with water or a solution to eradicate worms and insects is described.

1,566,925 (Dec. 22, 1925; appl. Dec. 11, 1924). INSECT EXTERMINATOR. Richard Rokohl, Orange Grove, Tex. - An apparatus for spraying liquid insecticides on several rows of cotton plants simultaneously for the extermination of boll weevils or like insects is described.

1,579,319 (Apr. 6, 1926; appl. June 19, 1922). SPRAYING MACHINE. John C, Hull, Gasport, N. Y. - A power machine for use in spraying orchards or other vegetation with an insecticide solution is described.

1,586,997 (June 1, 1926; appl. Apr. 10, 1922). SPRAYING APPARATUS. Arthur B. Hull, Gasport, N. Y. - This device for spraying insecticides upon foliage is adapted to operate with comparatively low pressure. It is provided with a plurality of spray nozzles and a fan to increase the area covered by the spray.

1,587,583 (June 8, 1926; appl. Apr. 11, 1925). SPRAYER. Richard Garland, Junction City, Kans. - The pumping mechanism of this horse-drawn sprayer is operable by the wheels of the supporting structure.

1,591,693 (July 6, 1926; appl. Jan. 15, 1925). SPRAYING MACHINE. Robert Atz, Denver, Colo. - A machine for spraying insect destroying solutions onto shade, fruit, and other trees, hedges, bushes and the like, adapted to be operated by pressure fluid such for instance as water taken from the domestic or any other suitable source of supply is described.

1,593,641 (July 27, 1926; appl. Mar. 20, 1924). FUMIGATING APPARATUS. George J. Wegerer, Bell, Calif. - Calif. Cyanide Co., Inc., New York, N. Y. - This apparatus for applying liquid hydrocyanic acid in fumigating vegetation, particularly citrus trees, is designed to eliminate leakage at the nozzle when not in use.

1,623,221 (Apr. 5, 1927; appl. Sept. 5, 1925). COMBINED AUTO TRUCK AND SPRAYER. Robert Weimer, Apple Creek, Ohio. - A device for spraying fruit trees and vegetables during growth and for transporting by motor vehicle, mixing and applying by hydraulic pressure spray material simultaneously, during transportation is described.

1,623,702 (Apr. 5, 1927; appl. Nov. 9, 1922). SPRAYING MACHINE. Philip W. Ramer, River Falls, Wis. - This apparatus for spraying vegetation comprises a tank in the upper part of which is a small perforated receptacle containing a substance which dissolves in water to form an insecticide and also, when wet, produces a gas. When water is placed in the tank and it is inverted, the water reaches this material and the gas formed produces sufficient pressure for spraying the insecticidal solution.

1,626,371 (Apr. 26, 1927; appl. May 25, 1923). SPRAYING ATTACHMENT FOR TRACTORS. Norman A. Wright, Pontiac, Mich. - Pontiac Tractor Co., Pontiac, Mich. - This tractor-driven sprayer is intended for use in orchards.

1,627,250 (May 3, 1927; appl. June 3, 1926). ADJUSTABLE LIP-SPRAY NOZZLE. William B. Parker, Placerville, Calif. - This device produces a broom-like spray, and is adjustable from a coarse spray that will reach the tops of the trees to a finer and wider spray for close work.

1,633,568 (June 28, 1927; appl. Nov. 28, 1924). MEANS FOR GENERATING AND IMPREGNATING STEAM WITH A CHEMICAL CONSTITUENT. Charles A. Brewer, Noroton Heights, Conn. - Cannon Engineering Co., Brooklyn, N. Y. - This device, for use in connection with a steam pressing iron, admixes with the steam delivered any desired chemical substance such as mothproofing substances, insecticides, disinfectant, germicides, or other substance with which it is desired to impregnate the goods being pressed.

1,634,701 (July 5, 1927; appl. Oct. 14, 1926). SPRAYING APPARATUS. John W. Williams, South Miami, Fla. - This apparatus for spraying small plants in the fields is primarily designed for applying an anti-freezing mixture on plants.

1,637,246 (July 26, 1927; appl. Sept. 11, 1926). EXTERMINATOR. Ellick J. Seaver, Beloit, Wis. - This device is designed to exterminate rodents, by spraying the backs of rodents passing under the device, with a liquid to cause instant death.

1,644,486 (Oct. 4, 1927; appl. July 3, 1926). SPRAYING APPARATUS. Frank C. Noel, Roanoke, Va. - Texas Co., Houston, Tex. - This apparatus is designed to be propelled over a railway track and to distribute a wood preservative or weed killer (e.g. petroleum oil) over the ties and road bed.

1,645,364 (Oct. 11, 1927; appl. Oct. 4, 1926). LIQUID STRAINER FOR ORCHARD SPRAYERS. Levi J. Weaver, Elrora, Ind. - This invention relates to a liquid strainer intended primarily for use on orchard sprayers.

1,653,562 (Dec. 20, 1927; appl. Dec. 29, 1924; in Great Britain Jan. 4, 1924). SYRINGE OR SPRAYER. William Grimley, Smethwick, England. - This invention relates to sprayers such as are used in gardening and horticulture.

1,666,178 (Apr. 17, 1928; appl. June 25, 1925). DISPENSING APPARATUS. Joseph D. Neuls, Los Angeles, Calif. - Calif. Cyanide Co., Inc. New York, N. Y. - This device delivers measured doses of poisonous liquid, e. g. hydrocyanic acid, in the form of a fine spray for use in fumigating citrus trees to destroy scale.

1,669,077 (May 8, 1928; appl. Aug. 6, 1926). MEANS FOR TREATING CLOTH, FABRICS, ETC. Charles A. Brewer, Darien, Conn. - Cannon Engineering Co., Brooklyn, N. Y. - This device comprises a means for producing a vacuum and a means of producing a very fine spray in the shape of a moist vapor, which may be water vapor (steam), or any other vaporized liquid. It may be used to remove wrinkles from cloth or fabrics and also for disinfecting it or preventing it from being attacked by mildew or moths.

1,679,305 (July 31, 1928; appl. Aug. 23, 1921). ATOMIZER. H. Howard Feller, Sound Beach, Conn. - This atomizer for spraying insecticides and similar liquids can be easily applied to a can of standard form in place of the original closure.

1,706,418 (Mar. 26, 1929; appl. Nov. 1, 1926). APPARATUS FOR SPRAYING PLANTS AND TREES. Thomas A. Sissom, Italy, Tex. - A machine for spraying cotton plants or other plants with poison to destroy injurious insects, parasites and the like or to treat the plants for blight, etc., is described.

1,716,583 (June 11, 1929; appl. Feb. 8, 1927). SPRAYER. Herbert B. Guthrie, Santa Clara County, Calif. - This invention relates to power sprayers of the type wherein a power plant is operated in conjunction with a pump and a reservoir for liquids to be used for spraying.

1,727,294 (Sept. 3, 1929; appl. Oct. 29, 1928). SPRAYING DEVICE. Howard Lennon, Coshocton, Ohio. - A spray for spraying gardens, orchards and the like, provides a mast carrying a boom which is placed on the vehicle carrying a tank and pump, the hose from the tank passing over a pulley on the boom to the nozzles which are arranged on a bar which is provided with shoulder straps so that the bar can be attached to the persons operating the nozzles.

1,751,709 (Mar. 25, 1930; appl. July 7, 1927). MOTOR OPERATING ATTACHMENT FOR LIQUID SPRAYERS. Frantz F. Nielsen, Rea H. Nielsen, and James F. Nielsen, Afton, Wyo. - This sprayer for disinfectants and other liquids is adapted to be installed as part of an automobile. The compression of the cylinder of the engine is utilized to supply compressed air to a liquid spray tank.

1,753,443 (Apr. 8, 1930; appl. May 31, 1927). TIP FOR SPRAYING NOZZLES. John D. Murray, San Francisco, Calif. - This tip for spray guns used in applying germicides and other liquids discharges the liquid in a fan-shaped, flat, film-like sheet, without scattering.

1,754,490 (Apr. 15, 1930; appl. Feb. 17, 1928). SPRAYING MACHINE. Samuel C. Steward, Hunting Creek, N. C. - This invention relates to the combination of a tractor equipped with a pump and a tank for holding spraying solution hooked on to the rear of the tractor.

1,757,573 (May 6, 1930; appl. Mar. 7, 1921). METHOD OF MAKING SPRAY GUNS. Walter A. Heinrich, St. Louis, Mo. - W. N. Matthews Corp., St. Louis, Mo. - This device provides a simple, quick and accurate method of testing and adjusting spray guns for wood preservatives, insecticides, etc.

1,760,179 (May 27, 1930; appl. Mar. 18, 1929). VINE PROTECTOR. Botsford S. Smith, Fort Fairfield, Me. - This invention relates to means for use upon vine spraying machines and the like for the purpose of deflecting the vines laterally out of the paths of the ground wheels of the machine, thereby preventing said wheels from crushing portions of the vines.

1,780,500 (Nov. 4, 1930; appl. Mar. 8, 1929). SPRAY-TANK AGITATOR. Elwin L. O'Hara, Antioch, Calif. - This agitator for a spray-tank used with a tractor-driven pump is actuated by the liquid itself to keep the solid matter in suspension.

1,783,882 (Dec. 2, 1930; appl. Sept. 10, 1928). HAND-PUMP SPRAYER. Max A. Kohn, Harrisburg, Pa. - This invention relates to spraying devices of the type adapted to be secured upon the bank of the operator for conveniently spraying trees, plants, etc.

1,786,431, (Dec. 30, 1930; appl. Feb. 20, 1924); renewed Apr. 28, 1928; divided and this appl. Sept. 17, 1928). SPRAYER. Anton W. Kegler, Minneapolis, Minn. - Hudson Mfg. Co., Minneapolis, Minn. - This sprayer is intended to meet the requirements of the small orchardist, gardener and fruit grower. It can be moved about in wheelbarrow manner.

1,800,156 (Apr. 7, 1931; appl. Sept. 30, 1927; in Norway Oct. 8, 1926). METHOD AND MEANS FOR THE ATOMIZING OR DISTRIBUTION OF LIQUID OR SEMI-LIQUID MATERIALS. Erik Botheim, Oslo, Norway. -

Liquefied dimethyl ether furnishes the pressure in this device for atomizing liquids, e. g. disinfectants. A non-combustible volatile substance, such as carbon tetrachloride, may be added to the dimethyl ether to raise the ignition temperature of the vapors.

1,806,192 (May 19, 1931; appl. Aug. 21, 1925). APPARATUS FOR SPRAYING. Charles D. Collins, New York, N. Y. - American Cyanamid Co., New York, N. Y. - This apparatus is flexible in that it allows of the accurate and rapid measurement of greatly varying doses of liquid fumigants and involves a minimum amount of skill and effort on the part of the operator. The fumigant may be a liquid mixture containing about 20 percent cyanogen chloride in hydrocyanic acid.

1,815,535 (July 21, 1931; appl. June 16, 1930). SPRAY NOZZLE. Henry C. Weitzel, Shiner, Tex. - A spray nozzle for spraying cotton is described.

1,846,198 (Feb. 23, 1932; appl. Oct. 9, 1926). DUSTING AND SPRAYING MACHINE. James O. Gulledge, Santa Ana, Calif. - This apparatus for spraying and dusting insecticides, fungicides, or similar solutions or dust onto trees, plants or the like, in order to kill insects, fungus and the like is mounted upon a truck chassis. The pump may be operated from a power take-off from the motor of the truck, and this power take-off is provided with a clutch means so that the same may be operated independently of the propulsion of the truck.

1,851,255 (Mar. 29, 1932; appl. Feb. 20, 1924; renewed Apr. 28, 1928). SPRAYER. Anton W. Kegler, Minneapolis, Minn. - H. D. Hudson Mfg. Co., Minneapolis, Minn. - A sprayer designed for applying poisonous liquids or liquid germicides in orchards and gardens is described. It can be wheeled about like a wheel-barrow.

1,863,158 (June 14, 1932; appl. May 28, 1931). SPRAY STOPPER. Irving H. Greene, New York, N. Y. - A spray stopper for a bottle is described which may be used to spray a liquid or powdered insecticide upon plants, shrubbery or flowers or to spray insecticide on clothing to prevent the ravages of moths.

1,864,505 (June 21, 1932; appl. Oct. 6, 1930). SPRAYING APPARATUS. Charles P. McCormick, Baltimore, Md. - This device provides a container for insecticides, etc., which can be easily and quickly attached to an air pump and removed therefrom when empty so that it can be replaced by a filled container.

1,869,992 (Aug. 2, 1932; Nov. 27, 1926; renewed Dec. 16, 1931). SPRAYING DEVICE. Peter L. Wilbur, Tuckahoe, [illegible] N. Y. - Wil-X-M'F'G' Corp., New York, N. Y. - This device may

be used as a fire extinguisher or a sprayer for insecticides.

1,886,369 (Nov. 8, 1932; appl. Sept. 19, 1930). TRACTION SPRAYER. John C. Bogart, Bay City, Mich. - A traction sprayer for agricultural crops is described.

1,891,325 (Dec. 20, 1932; appl. Sept. 6, 1930). SPRAYER DEVICE. John Fitch, Richmond Hill, New York, N. Y. - William M. Vogel, Glen Ridge, N. J. - A hand sprayer for insecticides for use in destroying insect pests such as mosquitoes, flies, roaches, ants, and the like is described.

1,892,750 (Jan. 3, 1933; appl. Nov. 12, 1928; in Norway Nov. 23, 1927). METHOD AND APPARATUS FOR ATOMIZING MATERIALS. Erik Rotheim, Oslo, Norway. - This device utilizes a condensible gas dissolved in liquid, e g. disinfectants, or insecticides, to be atomized, under pressure. Suitable condensible gaseous substances are :- dimethyl ether, methyl chloride, isobutane and other hydrocarbons, for example low-boiling petroleum distillates such as rhigolene, cymagene, etc. (b. p. about 0°C.), methyl nitrite (b. p. 12°C.), ethylene chloride (b.p. 15-18°C.), All these materials are condensible at pressures below 10 atmospheres.

1,899,222 (Feb. 28, 1933; appl. Mar. 1, 1929). MEANS FOR DISPENSING LIQUIDS UNDER PRESSURE. John F. Werder, Cleveland, Ohio. - A spray gun capable of being attached to a sealed original package of liquid insecticide, with means for puncturing the seal, is described.

1,900,837 (Mar. 27, 1933; appl. Sept. 8, 1931). SPRAYING APPARATUS. Henry J. Mills, Kinderhook, New York, N. Y. - An apparatus of the traveling type, for use in spraying fruit and other trees and similar vegetation is described.

1,902,548 (Mar. 21, 1933; appl. Jan. 13, 1932). WATER CARRIER AND THE LIKE. Francis F. Fenwick, Jr. East Orange, N. J.- A collapsible container to be carried on the back of the user may be employed for applying spray and other solutions in agricultural and horticultural operations.

Re. 18,813 (May 2, 1933; appl. Sept. 22, 1931; Original 1,744,208 Jan. 21, 1930; appl. Apr. 12, 1929). COMPRESSION SPRAY GUN. Isaac W. P. Buchanan, Lebanon, Tenn.- This device, while adapted to agricultural and horticultural needs, is mainly intended for the spray application of paints and lacquers and can be used with a minimum amount of compressed air and as it is of small weight, it can be easily carried from place to place.

1,923,266 (Aug. 22, 1933; appl. Apr. 4, 1931). PLANT SPRAYING MACHINE. Henri J. Houpert, Rye, N. Y. - An apparatus for spraying vegetation with insecticide or fungicide compounds is described.

1,926,579 (Sept. 12, 1933; appl. Mar. 8, 1933). METHOD OF DESTROYING INSECTS WITH PYRETHRUM. Walter S. Burgess and Earl K. Golley, Benton Harbor, Mich. - This apparatus utilizes steam atomization of pyrethrum to destroy insects. One ounce of 1 percent pyrethrum solution treated with 3 ounces of water converted to steam will effectively treat a room of 10,000 cubic feet capacity.

1,935,687 (Nov. 21, 1933; appl. June 4, 1930). SPRAYING DEVICE. Peter L. Wilbur, Tuckahoe, N. Y. - Wil-X-M'F'G Corp., New York, N. Y. - This spraying device may be used as a fire extinguisher or a sprayer for insecticides.

1,935,688 (Nov. 21, 1933; appl. June 4, 1930; original appl. Nov. 27, 1926). SPRAYING DEVICE. Peter L. Wilbur, Tuckahoe, N. Y. - Wil-X-M'F'G Corp., New York, N. Y. - This spraying device may be used as a fire extinguisher or a sprayer for insecticides.

1,935,689 (Nov. 21, 1933; appl. May 12, 1932). SPRAYING DEVICE. Peter L. Wilbur, Tuckahoe, N. Y. - Wil-X-M'F'G Corp., New York, N. Y. - This spraying device may be used as a fire extinguisher or a sprayer for insecticides.

1,937,344 (Nov. 28, 1933; appl. Sept. 21, 1931). HAND SPRAY PUMP. Carl W. Hollingsworth, Marshalltown, Iowa. - This spray device is to be used in connection with a familiar form of container commonly used for disinfecting liquids, liquid insecticide, plant sprays and the like. It is exceptionally useful for spraying plants with liquid insecticide or for spraying disinfecting solutions into desired locations.

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ASSIGNEE INDEX

(Numbers refer to patents cited)

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Sissom, Thomas A., 1,706,418
Smith, Botsford S., 1,760,179
Stewart, Samuel C., 1,754,490
Stirling, Frank, 1,489,907
Strain, Robert L., 1,465,377
Vowell, Grover C., 1,544,509
Weaver, Levi W., 1,645,364
Wegerer, George J., 1,593,641
Weimer, Robert, 1,623,221
Weitzel, Henry C., 1,815,535
Werder, John F., 1,899,222
Wilbur, Peter L., 1,935,687; 1,935,688; 1,935,689; 1,869,992
Williams, John W., 1,634,701
Willis, Leland and Woodworth, Olin F., 1,470,246
Woodworth, Olin F., (see Willis, Leland)
Wright, Norman A., 1,626,371
Zipeto, Cosmo D., 1,729,103